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# **USING INSIGHTS FROM (PUBLIC) SERVICES MANAGEMENT TO IMPROVE STUDENT ENGAGEMENT IN HIGHER EDUCATION**

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## **ABSTRACT**

This paper argues that current approaches used to assess and monitor student engagement in UK higher education are failing to fulfil their potential by superficially helping institutions to appear professional and innovative yet failing to accurately measure and improve engagement. Drawing on service management literature including (Public) Service Dominant theory, this paper argues that current strategies are failing to deliver for three main reasons. They do not capture the full value students derive from their engagement experience, they underplay the impact of peers within the

ecosystem and they do not effectively engage employees. The paper concludes by exploring the implications of these omissions for further research and practice.

## **KEY WORDS**

Student Engagement, Behavioural Analytics, Service Dominant Logic, Public Services Management,

## **INTRODUCTION**

Interest in the topic of student engagement in higher education and its impact on learning continues unabated (Kahu 2013; Lawson and Lawson 2013; Trowler 2010). This is maintained by an increasingly competitive environment, in which new student fee structures and growing private provision are fuelling interest in opportunities for market differentiation (Krause 2005). University managers see the provision of superior student ‘engagement’ as a source of such differentiation based on the suggested links between engagement and a number of key metrics such as retention, attainment and satisfaction (Trowler 2010). Most recently there has been a visible upsurge in the use of behavioural (or learning) analytics to track and shape engagement. Programmes such as the mainly US-based Skytracker® and the award winning Student Dashboard® (SD) in the UK, are tracking student engagement behaviours using a range of metrics. These include metrics for attendance (campus and class sessions) and access and use of the virtual learning environment and library.

Despite the rapid implementation of this software, there appears to have been limited conceptual reflection on the value and role of such programmes within the higher education student ‘engagement’ agenda. Concerns in the sector are already starting to emerge about exaggerated claims for their impact on student performance as well as ethical considerations related to student surveillance and data privacy (Warrell 2015). This paper argues that without critical reflection, there is a danger that student engagement strategies will become yet another example of what Alvasson (2013) describes as ‘grandiosity’ within the UK higher education system. On the surface offering institutions a “well-polished and status enhancing image” as innovators in realm of student experience, but in reality failing to lead to real improvements (p.18).

Parallel developments in the use of behavioural analytics are visible in the field of services management and marketing where, in contrast, customer engagement models have been developed based on extensive empirical and theoretical coverage (Hollebeek, Srivastava and Chen 2016; Verhoef, Reinartz and Kraft 2010; Bolton 2011; Brodie et al 2011). Research has explored a full range of customer contributions and interactions, beyond simply those associated with purchase. Many of these commonly take place within the digital landscape and include contributions to new service development, help offered to fellow customers via online customer communities, blogs and twitter feeds accessed primarily through mobile devices.

In services management there is also a wealth of research which evaluates the impact and value of specific engagement strategies. Managers are able to quantify the precise impact of customer engagement behaviours on key performance goals such as recruitment, development and retention (Kumar et al 2010). Research also highlights the full range of benefits users as well as organisations derive from engagement activities.

This user centric emphasis has been driven in part by the emergence of service dominant logic (Vargo and Lusch 2017). This represents a framework for a service-centred mindset and ‘a conceptual foundation for the development of the CE (customer engagement) concept, reflecting customers’ interactive, co-creative experiences with other stakeholders in focal, networked service relationships’ (Brodie et al 2011, 253). Its value has been acknowledged within public services where

Osborne (2010), for example, drawing directly on service dominant theory, argues for the development of a SERVICE framework (a Public-service–dominant Approach to sustainable Public Services). The notion of value co-creation, a central tenet within service dominant logic, has also been evaluated in the context of public sector (Osborne, Radnor and Strokosh 2016) and health service (Hardyman, Daunt and Kitchener 2015) management. With the exception of Lusch and Wu (2012), however, there has been limited consideration of its value within a higher education (university) context.

The aim of this article is to help ensure that the focus on student engagement in UK higher education leads to improved operations and practice. First it will identify the key principles from services management and marketing (and the more recent public-service-dominant approach) relevant to student engagement. This review evaluates the extent to which these principles are currently applied to student engagement practices in higher education. Second, based on the review, the article generates six propositions that represent omissions in conceptual understanding. The propositions centre on three main concerns with current strategies; a lack of appreciation of the value *users i.e. students* derive from their engagement experience, insufficient consideration of the impact of *peers* within the student ecosystem and a failure to involve *front line employees* effectively in either design or delivery. The final part of this article will conclude with further discussion and reflection on the implications of these propositions for student engagement strategies moving forward and highlights opportunities for further research.

Our review is sensitive to the concerns of those opposed to the uncritical adoption of the student as consumer rhetoric in the higher education context. (Furedi 2009; Streeting and Wise 2009; Little and Williams 2010). Our review acknowledges that HE like other ‘public services are typically more complex, encompass a broader array of service providers and stakeholders, and require higher levels of transparency and accountability’ (Hodgkinson et al 2017 p. 998 citing Osborne et al 2013). Of particular concern are the implications of our analysis for service delivery, specifically the potential shift in the locus of control and the importance of serving vulnerable groups. These are discussed in the limitations of the study.

## CONCEPTUALISING ENGAGEMENT: IMPORTANCE AND MEASUREMENT

In services management there is a general consensus that customer engagement involves a *complex blend of interactions which take place across multiple platforms* (Jaakkola and Alexander 2014; Vivek, Beatty and Morgan 2012; Van Doorn et al 2010). It involves more than simply engagement with purchase transactions. These behaviours have been categorised as augmenting, co-developing, influencing and mobilizing (Jaakkola and Alexander 2014) and compliance, co-operation, feedback, helping other customers and positive word of mouth (Verleye and Gemmel 2013). In their study of customers in a healthcare context, Sweeny, Danaher, and McColl-Kennedy (2015), identified a hierarchy of activities that cancer patients engaged in including, *focal firm (clinic) based* activities such as sharing information with the doctor and other patients, *beyond focal firm activities*, volunteering in support networks and *self-generated activities* such as praying and meditation.

More recently, scholars have moved beyond the exploration of individual engagement behaviours and begun to evaluate the *synergistic effects of customer engagement on value co-creation by multiple actors in a network setting* (Jaakkola and Alexander 2014; Chandler and Lusch 2015). Here there is explicit recognition that engagement with one individual needs to be understood through their relationship with other ‘actors’ in the service system. The actor-to-actor perspective is fundamental to value creation processes within service dominant logic (Vargo and Lusch 2017). Firms are encouraged to engage with customers, as well as other value creating partners in the firm’s value network.

Although the notion of student as consumer is still contested (Furedi 2009; Little and Williams 2010), the idea that there is value in viewing higher education through a service lens is more widely supported; 'No longer would we just view the teacher as the entity providing the service of education. The classroom and all of its tangible artefacts such as seating, lighting, and whiteboards are all part of the service provision' (Lusch and Wu 2012, 3). Using a services lens, students can be viewed at the very least as key stakeholders or service 'users', if not fullblown consumers (Naidoo, Shankar and Veer 2011). Although it should be taken into account that even if students are considered as a 'consumer' in the (higher) education process they are actually a co-producer as they are an integrated part of the system. Due to education and learning being a service knowledge is created or produced at the point of consumption so the students are part of the process and co-producers (Osborne, Radnor and Strokosh 2016).

According to Trowler (2015, 17) 'many articles, conference papers and chapters on student engagement do not contain explicit definitions of engagement, making the (erroneous) assumption that their understanding is a shared, universal one'. Kahu (2013) also highlights problems of definition and understanding about relationships between the different variables as barriers to research progress; 'while all agree it is important, there is debate over the exact nature of the construct; a key problem being the lack of distinction between the state of engagement, its antecedents and its consequences' (749). For many, student behavioural engagement refers to time and effort, interaction and participation (Trowler 2010; Kahu 2013; Hu 2010). It includes involvement in the teaching and learning process, giving feedback, evaluating teaching, student representation, student participation in governance, and student engagement in quality assurance and enhancement mechanisms, processes and procedures (Pimental Botas et al 2013). Behavioural analytics systems are increasingly being used to track specific 'engagement' behaviours. Appendix 1 provides an example of such a system which tracks student library resource use, door swipes and access to a virtual e learning environment to give staff and students an overall 'engagement score'. Although many of the metrics used align closely with those of interest to service managers, there appears to be a slower uptake of interest in the various forms of engagement visible within the digital landscape e.g. the students' engagement with relevant social media platforms.

In services management there is little doubt that customer engagement is a strategically important issue linked to key performance outcomes (Radnor and Johnston, 2013). Within 'interactive dynamic business environments, customer engagement (CE) represents a strategic imperative for generating enhanced corporate performance' (Brodie et al 2011, 252). Mustak, Jaakkola and Halinen (2013) summarise the variety of value outcomes in the various research streams. For a business, these include economic value (e.g. better brand image), increased repurchase and referrals, relationship value (e.g. enhanced trust and loyalty), and satisfaction and value related to innovation and development (e.g. improved customisation). Kumar et al (2010) identify four ways customers generate value to the firm through engagement activities; their own transactions (customer lifetime value), the behaviour of referring prospects (customer referral value), the encouragement of other customers to make a purchase (customer influencer value) and feedback to the firm on improvements/ideas (knowledge value). They offer the customer engagement value (CEV) components as a dashboard of customer metrics for top managers that can be monitored over time. In short, the purpose and value of gathering behavioural insights is clear.

Student engagement is considered to be a strategic priority in higher education in the UK. Trowler (2010) cites seven reasons why institutions should monitor student engagement. First, to improve student achievement based on the view that 'academic achievement is positively influenced by the amount of active participation in the learning process' (Graham et al 2007, 233-234). Second, to improve throughput and retention rates. Third, to monitor (and improve) the experience of underrepresented and disadvantaged students. Fourth, to improve and enhance the curriculum. Fifth,

to generate reputational and financial gain for the institution (Coates 2005). Sixth, to help promote the service to others and finally, seventh, the catch-all reason, economic payback.

However, whilst the full range of outcomes that could potentially result from gathering behavioural data is well documented, what is less clear is which slice of student data is shaping which outcome. The main objective seems to be improved student retention, the second reason cited in the list above, which arguably has mutual ‘financial’ benefits for both the institution and the student. Information is gathered to track attendance and participation at lectures and seminars to be able to ‘red flag’ students with low interaction, make contact and offer additional support as appropriate. Other links to outputs appear to be more tenuous and largely unsubstantiated through rigorous empirical research. For example, how the ‘engagement’ data helps to improve the curriculum or the student experience, or leads to better performance? These are all relationships that still require empirical investigation.

Arguably, the relative newness of engagement as an operational focus within higher education and the complexity of cause and effect in educational outcomes makes measurement particularly challenging. However, lessons from services management suggest that to get meaningful assessment of impact requires isolating the various objectives and having different instruments in place to measure each outcome (Radnor and Johnston 2013). Is it realistic to expect one ‘engagement’ system to improve student retention, increase a sense of belonging, enhance corporate reputation and provide economic payback?

### **The need to understand the contribution of (and outcomes valued by) students (or users) as well as organisations**

A customer centric perspective has traditionally characterised much of the engagement research in services management. It has, however, been elevated in importance by service dominant logic where customers are key beneficiaries, operant resources and a major source of strategic advantage (Vargo and Lusch 2017).

Service dominant logic gives priority to understanding the value or benefits customers derive from engagement activities as well as those of the focal firm. Researchers have identified specific benefits for customers including an increased sense of control and empowerment (Bagozzi and Dholakia 2006), economic value in terms of convenience and cost (Bitner et al 1997), and networking opportunities and skills enhancement (Gronroos 2008). Profiles of customers link their level of engagement to benefits they take from the activities. For example, McColl Kennedy et al (2012) in their research in health care settings uncovered five groupings of customer value co-creation practices yielding a typology of practice styles linked to patients’ quality of life. The practice styles include team management, insular controlling, partnering, pragmatic adopting and passive compliance. The styles reflect the different values users get from their engagement with oncology services. For example, some users play a passive role, valuing regular formal updates from professionals. Others see themselves much more as partners and contributors and value the opportunity to gather and share information with professionals and other patients between consultations. They urge service firms to pay particular attention to their customers’ engaged practice styles and preferences in order to operate effectively in today’s increasingly networked and collaborative market (McColl Kennedy et al (2012). Hardyman, Daunt and Kitchener (2015) also highlight the importance of understanding the value co-creation process in a healthcare context. They call for more empirical studies of “value co-creation’ (from a SDL viewpoint) and the roles that patients (potentially also friends, family, and peers) and providers adopt as co-creators of value”. In the education literature there appears to be less emphasis on understanding and articulating precisely what benefits students (and sub groups) derive from different forms of engagement as well as a lack of clarity about which activities they as users feel constitute an appropriate/effective level of engagement. A recent ethnographic study of student perceptions of value derived from engagement in the university experience reveals that more benefit

is derived from participation in extracurricular activities such as sports society meetings and events rather than ‘core’ activities of lectures and seminars (Farrier-Williams, Woodall and Sullivan 2018). According to Trowler (2010, 50) most of the educational literature ‘assumes the benefits of student engagement’. According to Naidoo, Shankar and Veer (2011, 1151) ‘principles emerging from the concept of co-creation have affinities with pedagogical models of learning based on social constructivism which emphasise the learner as an active agent’. So, to what extent is the evidence of these principles reflected in many student engagement practices (Chambliss & Takacs 2014; Bunce, Baird and Jones 2016)?

The absence of the student voice appears to be most marked in the development of behavioural analytics systems. These seem to be underpinned by the assumption that the educationally purposeful dimensions being measured have the same value to both students and higher education managers. The question about what students themselves consider the best measure of their engagement experience does not seem to be extensively considered. It may be, for example, that the metric which links most readily to student performance on a module might be the number of times an individual connects with resources on an (external) professional body website. Only the individual student will be able to identify this as a relevant behavioural measure based on their own assessment of its value.

We argue that because of the elevated importance of customers and the customer centric perspective in contemporary services management research, most notably service dominant logic, and the paucity of “customer focused” research in the educational context, there is a pressing need to explore’ the concept of ‘student engagement’ from the students’ perspective. This includes problematizing the student role and identity in changing contexts, such as part time students, students who return to interrupted studies, working students and students with family responsibilities (Trowler and Trowler 2010), and leads to our first proposition.

*Proposition 1: An effective engagement strategy should be underpinned by a shared and agreed view of the value ‘users’ (students) derive from their experience*

In services marketing, the most recent service dominant (S-D) logic informed definition of engagement explicitly acknowledges the importance of understanding and mobilising the user’s contribution. According to Hollebeek, Srivastava and Chen (2016, 6) engagement is ‘a customer’s motivationally driven, volitional investment of focal operant resources (including cognitive, emotional, behavioral, and social knowledge and skills), and operand resources (e.g., equipment) into (brand) interactions in service systems’. Understanding how to get users to buy in to the system and the resources they are both willing and able to contribute has become a research priority. The distinction between operant and operand resources of users is critical within the S-D framework. Cassidy and Resnick (2019) recently explored user value co-creation processes in strategy making in the High Street ecosystem. The research identified a wealth of operant resources i.e. skills and knowledge which residents were willing and able to contribute to help high street regeneration activities. One resident for example operated a successful online media communications business and was happy to contribute his skills freely to help develop the media strategy for the town.

Within an educational context, *operant* resources, i.e. the students’ capabilities and skill sets will have a significant influence on their ability to interact with the behavioural analytics systems. Their *operand* resources or tangible equipment they use to interact with the software i.e. personal mobile phones might also affect system efficiency and effectiveness. Hollebeek, Srivastava and Chen (2016) stress the importance of not only understanding the operand and operant resources users possess but their resource integration, knowledge sharing and learning processes. The importance of understanding the knowledge and resources of service users is seen as fundamental to the development of a sustainable public service organisation and underpins the Service framework (based on a public–service-dominant approach) proposed by Osborne, Radnor and Nasi (2013). The



challenge is to know how to unlock the tacit knowledge and skills of users and use this creatively to drive improvement and innovation; “Sustainability derives from the transformation of user knowledge” (p. 424).

In education, Kahu (2013) developed a conceptual framework of engagement, antecedents and consequences, which locates students at its heart of the process. Rather than seeing engagement as something that is co-created, the literature tends to emphasise institutions and students as two very separate entities with different sets of priorities. This separation is reinforced by Bryson, Cooper and Hardy (2010) who view engagement as a process referring to what institutions do to get students to engage, e.g. hold lectures and seminars etc., which is very separate from what students actually do. According to Lusch and Wu (2012), based on their application of service dominant logic, the value of a lecture as a service is always co-created with students. Considering that indeed any value that is partially dependent on the involvement of others is by definition a co-created value (Osborne, Radnor and Strokosh 2016) leads onto the second proposition.

*Proposition 2: The engagement strategy should be constructed from an understanding of the operant and operand knowledge and resources individual ‘users’ (students) draw on to co-create their experience*

Although customer engagement has cognitive, emotional and behavioural dimensions, historically there has been a notable emphasis on measuring overt customer behaviours (Brodie et al 2011). This led to an interest in behavioural analytics largely incubated within the field of relationship marketing (Sheth 2015). Attention has turned more recently to understanding the *emotional dimensions* of customer engagement, seen as a potential differentiator within an increasingly digital service experience. Emotional facial recognition software is used in many service settings, for example, to monitor consumers’ real time emotional responses to their engagement experience. Russian technology start-up company Synqera is using a system combining emotion or facial recognition with big data to improve personalised engagement for customers. If a customer is not smiling when he/she passes through the checkout, the software system recognises past frequent purchase of body care products and at the check-out the screen may suggest a relaxing body oil or another pampering product, display a funny image, or offer a bonus or discount. Gamification, or the techniques used to ‘leverage people’s natural desires for competition, achievement, status, self-expression, altruism, and closure’ (Park and Bae 2014, 19) is also being used as an engagement strategy to respond to consumers emotional needs. By building challenge, fun and excitement into the service experience companies have found that they can go beyond transactional relationships and develop partnerships with their customers (Werbach and Hunter 2012). Probably the most successful example of effective ‘emotional’ engagement is Pokémon Go, the augmented reality mobile game developed and published by Niantic for iOS and Android devices. The game was based on a novel proposition which asked users to go outside, point their smartphone at the real world and catch some monsters. Although initially seen as a fad, it is claimed that it has almost never dropped out of the daily top 100 downloaded apps in both the iOS App Store and the Google Play Store (Iqbal, 2019). The main reason for its success is simple. It taps into emotional responses, giving users the tools to fantasise and play a part in a large exciting connected community. Considering this, we present proposition three.

*Proposition 3: An engagement strategy should take into account that the ‘user’ (student) perspective includes behavioural, cognitive and emotional responses*

### **Acknowledging the impact of other key ‘actors’ within the service eco-system**

According to Vargo and Lusch (2016) and the subsequent SERVICE framework (Osborne, Radnor and Strokosh 2016), value creation takes place in networks and public services are systems. This systems perspective has four implications and challenges for service organisations. It steers ‘attention from parts to wholes, from objects to relationships, from structures to processes and from measuring to mapping’ (Vargo et al 2017, 261). According to Service Dominant Logic (SDL), the resources used in service provision typically, at least in part, come from other *actors* in the system and “value is co-created by multiple actors, always including the beneficiary” (Vargo and Lusch 2017, 47). In short, SDL draws attention to the interactive nature of customer engagement and the need to account for the customers’ connections within their service ecosystem as well as their psychological disposition (Brodie et al 2011; Chandler and Lusch 2015). The challenge for retailers in understanding customer engagement, for example, is not only collecting and analysing consumer interactions through point of sale and loyalty card data but linking this to more unstructured data sets available through tracking real time conversations on social networks. This provides a more holistic picture of consumer behaviour taking into account relevant relationships in their social setting. According to Robson (2015), the most progressive organisations are those who are skilled at combining data sets and embedding analytics in their day-to-day routine. To fully understand customer engagement, there is a need to understand ‘the community around engaged customers, that is the citizens and organisations that are affected by, or affect the behaviour of the ‘engaged consumer’ (Jaakkola and Alexander 2014, 249). Chandler and Lusch (2015) reinforce this wider view with reference to the two core properties of engagement: connections and dispositions; ‘Connections are external properties and are temporal and relational, and dispositions are future, past and present psychological states of an actor’ (9). To fully understand engagement they argue that organisations need to identify how the consumer’s present-day connections have emerged from past experiences (temporal) as well as their network of relational connections which they are drawing on through their engagement activities. Cultural differences between consumers have been highlighted as a particularly influential moderating effect (Vibert and Shield 2003).

Research in services management draws attention to the detailed nature and impact of the interactions between actors in the service system. This is explicitly recognised within the process of consumer experience modelling (Baron and Harris 2010). Building on service dominant logic, this offers a consumer-centric perspective on experiences and interactions, which explicitly recognises the value users derive from engagement within a wider network of relationships. Using consumer voice data, their research highlights which activities and relationships add the most value to the engagement experience. They refer to value enhancers and value inhibitors operating within the consumers’ ecosystem. It could be considered that engagement with a bank is important to a student as it provides finance to support their time at university i.e. a value enhancer. A student’s engagement with family members could be both a value enhancer, making their parents feel proud of their achievements but could also act as an inhibitor leading to homesickness in the first year. The case of parents, “Helicopter Parents” in the extreme, is a good example of the influence of other actors with the positives of the secure base (Bowlby, 1988) balanced by issues with self-authorship (Keegan, 1994) and infantilisation (e.g. Williams, 2012).

Without explicitly using systems terminology, education scholars have also stressed the need to acknowledge the social and ecological context of engagement (Bronfenbrenner 1994; Lawson and Lawson 2013). There has been explicit recognition of the importance of considering the influence of peers, family and cultural background. A number of engagement frameworks clearly ‘embed student engagement within wider social, political and cultural discourses’ (Kahu 2013, 768). In practice, these connections should be relatively easy to build into the system as there is an extensive and growing array of student information that is available and accessible to higher education managers. As well as general geodemographic data, students provide information about their family background, educational experience and qualifications, and previous work experience. However, although educational research acknowledges the affective, cognitive and behavioural dimensions of

engagement, most behavioural software focuses on gathering data about what happens ‘within the context of life in schools (university), namely what happens in the classroom and inside the school (university) walls’ (Lawson and Lawson 2013, 435) and the units of analysis are the classroom, student and teacher. Arguably, this generates little analysis of the relationship between out of school settings and academic engagement. There is a need to better specify and integrate the various social ecologies in which engagement occurs. Lawson and Lawson (2013) call for the need to adopt a social ecological perspective, which acknowledges that ‘the quality and nature of student engagement experiences and dispositions is often highly conditional upon surrounding organisational conditions and ecologies, namely factors that are external to the student’ (452). We support this call through proposition four.

*Proposition 4; Engagement strategies should acknowledge and account for all value enhancers and value inhibitors within the user (student) wider ecosystem*

The paper will now consider the wider user ecosystem drawing on a range of examples outside Higher Education (HE) before considering applications related to students.

### ***The influence of peers***

One particular set of interactions seen as particularly critical within the service value network is consumer-to-consumer interactions (Grove and Fisk 1997; Harris and Baron 2004; Nicholls 2010; McColl-Kennedy et al 2012). These include conversations. Such exchanges have been shown to have a positive and negative impact on a consumer’s engagement experience. In the digital realm, exchanges most commonly manifest in online communities (McWilliam 2000; Brodie et al 2013) where engagement with fellow consumers often has greater impact than interactions with the focal firm. Content is largely generated and shared by community members and the role of the company is simply to facilitate, regulate and monitor customer-to-customer interactions. A good example in practice is the Baking Mad community established by The Silver Spoon Company ([www.bakingmad.com](http://www.bakingmad.com)). Although the site has been established by the company and customer interactions are closely monitored, the content is largely generated by members themselves and many users are unaware of the nature and extent of the company’s intervention. Customer experience modelling (Baron and Harris 2010) also prioritises customer-to-customer interactions within the network of relationships that impact the customer experience. These are referred to as core first order interactions.

Although the impact of customer-to-customer relationships on student engagement does not tend to feature prominently in the education literature, these relationships are clearly influential in practice. Social networking websites such as Facebook have become so popular among university students that they have formed an integral part of the students’ social life and university experience (Deng and Tavares 2013).

Many behavioural analytics systems, such as the one described in appendix 1, allow students to benchmark their engagement score against fellow students thus empowering them to manipulate’ their own behaviour in relation to the perceived group norms. Therefore, we present proposition five.

*Proposition 5; Engagement strategies should explicitly acknowledge the influence of peer to peer relationships on user (student) experience*

### ***The importance of service employees***

As well as fellow consumers, another set of key actors in the generic service system have always been service employees. Front line employees (FLE), in particular, have been influential in generating the positive service climate required for effective customer engagement (Bowen and Schneider 2014; Wilder, Collier and Barnes 2014). Their contribution has two dimensions. First an

employee's response has a direct impact on a customer's engagement experience (Brodie et al 2011). In their study of the drivers of customer engagement behaviours in a public service transport system, Jaakhola and Alexander (2014) identified relationships and communications with service employees as one of six key drivers. More recently, Bowen (2016) identified four critical employee roles within increasingly complex service settings; innovators; differentiators; enablers and coordinators. The last two roles have become arguably more significant as the customer's contribution has expanded. Employees are now expected to 'select, socialize, train, and incentivise customers to co-produce (or 'engage') effectively' (9). Hsieh and Yen (2005) draw attention to the potentially negative consequences of this involvement, illustrating how customer participation can be positively related to perceived employee job stress. The second dimension is the extent to which employees are involved in the design and implementation of specific customer engagement initiatives. For many service organisations, training employees to engage appropriately with customers is seen as a priority. Dell for example, having identified social media as a strategic customer engagement platform, have developed a Social Media and Community University programme (SMaC U) for its employees to ensure they have the requisite skills and expertise to engage with customers effectively through these channels. To date over 15,000 of Dell's employees have been trained and certified for their use of social media. This strategy recognises the key role employees play as brand ambassadors constantly engaging with customers (Direct2Dell, 2015).

The critical role that academic staff play in student engagement is recognised within the literature (Trowler 2010). According to Umbach and Wawryznski (2005, 173), they are a key component of the educational context with faculty behaviours and attitudes having a 'dramatic effect on student learning and engagement'. Others make reference to the importance of the teacher's emotional disposition in terms of creating a sense of belonging particularly in the context of face to face interactions. (Bryson and Hand 2007). There is also a growing body of research exploring the role of tutors in the development and maintenance of online communities (Lai 2015). The role of the tutor as 'facilitator' and co-ordinator, structuring activities and encouraging knowledge sharing, remains central to the effective operation of the community. Indeed, the lack of teacher presence has been shown to have a negative impact on the quantity and quality of student contributions (Finegold and Cooke 2006).

However, there appears to be less research that explicitly explores the role and impact of lecturers as actors in the development and implementation of current student engagement initiatives. Naidoo, Shankar and Veer (2011, 1151), viewing education as a knowledge adding process, see students configured as "uniquely skilled participants, who, for the production of value-in-use to occur, must be given the opportunity to share their knowledge and make significant inputs to the learning and teaching process'. They add that a 'new understanding of the role of faculty' (1151) would be required. It is not clear how this has been manifested in practice. A positive outcome claimed for the more advanced behavioural analytics platforms is that they provide staff with information about the student's engagement profile enabling more relevant and tailored (personalised) sessions. Empirical evidence to support these claims is currently very limited as is any evaluation of the level of engagement of lecturers with the initiatives.

The critical role of front-line service employees as key actors, and the need for a new, more involved understanding of the role of faculty, leads to our final proposition, proposition six.

*Proposition 6; A parallel strategy should be developed to engage front line service employees (both academics and professional services) in user (student) engagement*

Drawing on literature from service marketing and management, and recent developments in (Public) Service Dominant theory, we have argued that current student engagement strategies are failing to

deliver in three key areas. Firstly, they do not capture the full value users, in this case students, derive from their engagement experience. Secondly, they do not give explicitly acknowledge the impact of peers within the student ecosystem and, finally, they do not effectively engage employees in either system design or delivery. The final part of this article will develop further discussion, reflection and questions for further research.

## **DISCUSSION: Opportunities and Limitations**

### **Opportunities**

It is clear that student engagement research, policy and practice “play a key role in today’s race to the top policy environment” (Lawson and Lawson 2013, 432). However, there does appear to be some ambiguity around about how student engagement is currently defined, what activities should be measured and which activities link to which performance outcomes. At present it appears behavioural analytics systems have been largely designed based on the constructionist assumption that ‘learning is influenced by how an individual participates in educationally purposeful activities’ as defined by the organisation (Coates 2005, 26). For example, metrics measure factors such as attendance, library usage, campus swipes and engagement with learning materials based on the largely untested assumption that these are the most critical aspects of the student’s engagement experience. This is unsurprising perhaps as it reflects the traditional view of co-production within Public services, rather than value co-creation perspective implicit within SDL and the Public Service Dominant approach (Osborne, Radnor and Nasi 2013). Educators within the Higher Education system are viewed as ‘public officials’ exclusively charged with the responsibility for designing and providing services to citizens,(students) who in turn only demand, consume and evaluate them’ (Osborne, Radnor and Strokosch 2016). Engagement strategies have largely been designed to enable the view of service users to be ‘added into’ the process of service planning and production to improve the quality of these services (641)

This perspective contrasts with the predominant view in services management literature, which explicitly captures the activities valued by the focal actor (student), as well as the organisation in developing appropriate measures. There is also a concern that in many cases, one system is being used to achieve multiple goals generating exaggerated and unsubstantiated claims about impacts.

As well as definitional concerns, the comparative review of the literature suggests that current approaches to developing student engagement initiatives deviate from those in services management in two key areas captured within our six propositions. These are firstly understanding where students derive value themselves and, secondly assessing the impact of other ‘key actors’.

Exploring the *first*, research is needed to better understand and respond to the benefits or value *students themselves* derive from which aspects of their engagement experience. Within the myriad of student engagement ‘interactions’ for example, which are most influential and have the greatest impact on their engagement? Are there key value enhancers and inhibitors in terms of activities, individuals and institutions? If so, who are they and what role might the university play in shaping this relationship? If regular contact with a bank, for example, offers reassurance to students enabling them to engage more effectively, the institution may want to consider developing strategies to more formally connect this value enhancing organisation to the students’ engagement experience, perhaps through links to financial support services.

If student insights were to parallel those in services management one might also expect to see some consideration of student’s emotional engagement alongside behavioural metrics, to provide a rounded picture. The relatively high penetration of mobile technology amongst students offers a range of innovative low cost options to access this highly relevant information (e.g. traffic light based instant feedback programmes). Initiatives in this area would clearly need to be sensitive to the unique and already highly emotive context of the student learning environment. For many students, for

example, the first year of university, with all its requisite transitions, is already seen as one of the most stressful periods in life (Dyson and Renk 2006). Negative emotions are already running high with anxiety about entering a new environment with different friendship groups, subjects, learning approaches and teaching styles. Care needs to be taken to ensure new strategies do not aggravate these existing insecurities.

By adopting more recent models from service management, the capabilities and assets (operant and operand resources) that students bring with them into the learning encounter could also be recognised and utilised to result in the co-creation of learning. Insights from the marketing field, which illustrate how providers can enhance consumers' abilities to create value by identifying new opportunities and by increasing consumer access to operant resources, can be readily applied to higher education (Payne, Storbacka and Frow, 2008; Naidoo, Shankar and Veer 2011). For example, many students have relevant prior experience with family contacts in business that they could share with peers. These operant resources could be formally acknowledged and incorporated within the curriculum with the potential to enhance both engagement and commitment. Again any innovations would need to acknowledge the unique and complex set of actors at play in the university context. Although a strategy to involve parents might seem intuitive appealing from a 'relationship marketing' perspective, Williams (2012) advises caution when encouraging parental and family involvement, highlighting the potential to infantilise the students experience, constraining their transition to adulthood or what Keegan (1994) refers to as [a lack of] self-authorship.

Considering the *second*, research is needed to identify and acknowledge the impact of other key 'actors' and interactions within the student service eco-system. These include interactions formed via previous experience (work and academic) and wider social networks (family, peers). Acknowledging the complexity within a service system, managers traditionally use service blueprinting and mapping to track customer behavioural interactions throughout their engagement experience (Shostack 1987; Bitner, Ostrom and Morgan 2008). Blueprints and maps offer a visual representation of key consumer encounters within their entire service journey. This information has already been used effectively in education to identify potential bottlenecks and service failures and facilitate effective resource allocation (Radnor et al 2014).

Of particular concern here seems to be the limited acknowledgement of the impact of fellow students and academics in the development of student engagement initiatives. Although data on many of these influences is available via other channels, there is an opportunity to draw this in to behavioural systems to establish a more holistic picture of the student engagement experience. According to Trowler (2010), there is also a paucity of work that adopts a 'social constructionist perspective' (49) to capture these user insights. As Kahu (2013) notes, 'the use of in-depth qualitative methodologies is recommended to capture the diversity of experience, and also longitudinal work that examines the dynamic process that is student engagement' (769). The need for an expansion of methodological approaches to explore the dynamics of the service ecosystem is echoed by Vargo and Lusch (2016). To develop this depth of understanding, we support the call by Hardyman, Daunt and Kitchener (2016) for 'research of a more ethnographic nature' and 'a repertoire of methods (i.e., observation, interviews, and documentary analysis) in healthcare to better understand value co-creation processes. (103)

Both sets of 'engagement' literature recognise that an effective 'service' user engagement strategy should be based on a shared understanding about what is being measured and why, a detailed knowledge of the contribution of (and outcomes valued by) users and recognition that value is co-created through multiple interactions with a variety of stakeholders in the service ecosystem.

Table 1 below summarises the propositions derived from the comparative review and highlights some questions for further research

**Table 1: Propositions for student engagement strategies and questions for further research**

## **Limitations**

We acknowledge that we have to proceed with caution when trying to transfer lessons from the private to the public sector and even within the public sector (i.e. health, education, government, uniformed services etc.) Public services have distinctive characteristics, which means that some reflection is required about the potential problems that might arise from the transfer of service dominant logic insights to a University context. There are two particular areas of concern, which arise from our review. First and perhaps the most obvious are risks associated with adopting a more customer/student centric approach to engagement in the education context. As Jaakkola and Alexander (2014, 258) note, ‘firms can encourage customer engagement behaviour by being open, accessible and adaptive to customers’ resource contributions but it requires that they to some extent cede control’. If, for example, research indicates that students attribute less value to the formal lecture but engage more effectively with certain peers or family members through Facetime, institutions cede control over delivery mechanisms. Consequently, institutions would also have to reshape monitoring systems based on less or limited information, relying much more on students for input. It is vital in this process that the professional expertise of public service employees, in this case educators, is not undermined or diminished. Although their role might transition from being the source of all knowledge to a facilitator and intermediary in the learning process, they are still vital to the effectiveness of any engagement strategy hence we advocate that they be involved in co-creating, co-design and delivery of any system.

Second, any system needs to be designed to be sensitive to the engagement needs and capabilities of multiple stakeholders and vulnerable groups within the HE public sector context. Unlike private organisations, universities have a clear social as well as economic imperative. Current behavioural analytics systems operating currently appear to have been designed based on the assumption that all participants are equal in terms of both willingness and ability to engage. Design needs to be shaped to account for the responses of those who are unable or unwilling to respond effectively.

Although we recognise that there may be opposition to adapting many aspects of a service dominant approach to student engagement, e.g. over customisation of approaches leading to inefficiencies (Peters & Pierre, 2000), we align ourselves with the view of Osborne, Radnor and Nasi (2013); applying a service dominant approach to aspects of public services delivery “can lead to a strategic approach for public sector organisations that is more in line with the realities of contemporary public services delivery in a plural and fragmented environment” (143)

## **CONCLUSION**

This paper has argued that current approaches used to assess and monitor student engagement are failing to fulfil their potential. We have argued that on the surface current approaches may be helping institutions to appear to be professional and innovative but in reality failing to accurately measure and improve engagement holistically. Drawing on literature from service marketing and management, and recent developments in (Public) Service Dominant theory, we have argued that current strategies are failing to acknowledge the value users, i.e. students, derive from their engagement experience, are paying lip service to the impact of peers and are not effectively engaging front line employees in either strategy design or delivery.

The article concludes by identifying a series of propositions and questions (table 1) for further research which, when addressed, would result in a more robust and (public) service oriented frame of

reference for future student engagement strategies. Like Kahu (2013), this paper acknowledges that there is value in the behavioural approach in generating an evidence base for more informed decision-making. Indeed, it has recently been argued that it would be unethical not to use this type of data to help students perform better and prevent them from dropping out (Belgutay 2016). What is being suggested here is that higher education institutions proceed with caution, draw on extensive research and practice in (public) service management, widen the evidence base and develop a robust system which captures both quantitative and qualitative insights. The outcome should be for all in the ecosystem where student engagement strategies lead to improved operations and practices.

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**TABLE 1**

**Propositions for student engagement strategies and questions for further research**

<i>Proposition</i>	<i>Research Questions</i>
1. An effective engagement strategy should be underpinned by a shared and agreed view of the value 'users' ( students) derive from their experience	What activities and relationships do student users value within their 'engagement' experience?  Are there different segments of students with different engagement needs and preferences?
2. The engagement strategy should be constructed from an understanding of the operant and operand knowledge and resources individual 'users' (students) draw on to co-create their experience	What operant (skills and knowledge) and operand resources (tangible assets) are individual students using to co-create value?.  How might these resources be used to improve the engagement experience for others?
3. An engagement strategy should take into account that the 'user' (student) perspective includes behavioural, cognitive and emotional responses	What specific emotions are stimulated by different aspects of the student engagement experience?  How might the students' emotional needs be met with innovative strategies?
4. Engagement strategies should acknowledge and account for all value <i>enhancers and value inhibitors</i> within the user (student) ecosystem	Which actors and activities within the students' eco-system are enhancing the student experience and which are inhibiting?  How might the engagement strategies be developed to encourage enhancers?
5. Engagement strategies should explicitly acknowledge the influence of peer to peer relationships on user (student) experience	What is the impact of the behavioural, cognitive and emotional behaviour of fellow students?  How might this information be used to design future strategies?
6. A parallel strategy should be developed to engage front line service employees (both academics and professional services) in user (student) engagement	What is the employees view on the most effective student engagement strategy?  How might employees be rewarded for involvement in the design and implementation of strategies moving forward?

### **Appendix1: An example of a behavioural analytics system designed to measure student engagement: The Student Tracker System (STS)**

The STS was conceived as a student engagement initiative linked to the strategic objectives of the University, most notably to improve student attainment, retention and belonging by providing a more personalised service. The STS was developed in partnership with commercial company, a leading provider of Information Technology solutions and services with a client base of private and public sector organisations.

At the heart of the STS is an algorithm that ‘counts’, each day, the number of times a student engages and then compares this with engagement in previous days and weeks. Data inputs include information from a range of internal sources, broken down into the categories of profile (biographical/profile) and behavioural engagement (i.e. attendance, virtual learning environment access and use, and library access and use).

The system classifies engagement as *no engagement* if no behaviours are recorded for a sustained period of time (at least 6 days) *limited engagement* if only recorded in the previous 48 hours and *good and or high engagement*, indicated by increasing amounts of daily engagement.

In this way, engagement ratings are based on criteria, not on a normative distribution. Outputs are available in a number of formats including a real time view for students and staff and various reports ranging from overall levels of engagement to engagement level breakdowns for student groups (course, level etc.)

Figure 1 – An example showing a student’s engagement score– week by week

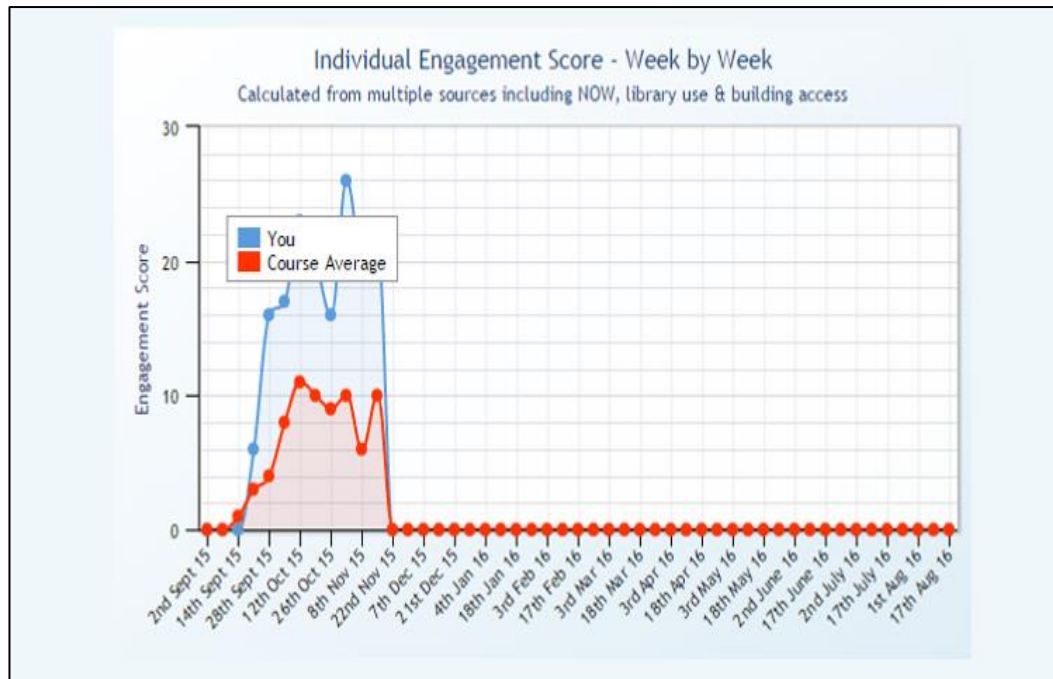
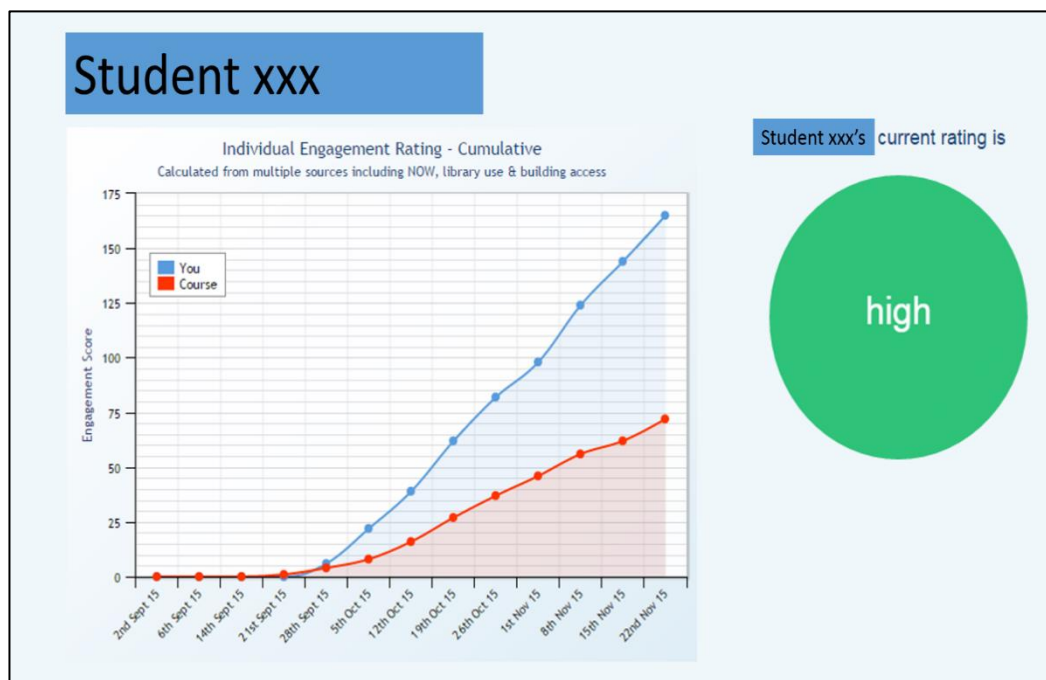


Figure 2 – An example showing a student’s engagement rating - cumulative



The system claims to provide the following benefits

- Improve ***student attainment***. The system encourages students to be active rather than passive learners, by attending lectures, seminars and using learning resources. As students can see how their engagement compares to that of their peers they are motivated to improve their profile.
- Provides a ***performance measurement tool for academic purposes***. It provides a link between engagement and performance.
- ***Personalises the relationship between staff and students***. Staff can hold one to one meetings with students and use the engagement profile as a starting point for a personal discussion about progress
- Improves ***student retention***. The system provides early warnings of problem cases and thus allows early intervention

